

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A recognition process for handwritten characters, including:
 - generating sub-segments representing at least one character stroke, said sub-segments each having a boundary enclosing the at least one stroke of the sub-segement;
 - merging said sub-segments when the distance between centroids of the sub-segments are less than a predetermined threshold; and
 - generating segments representing possible characters from said sub-segments.

2. (Previously Presented) A recognition process as claimed in claim 1, including processing a new character stroke by including said new stroke in one of said sub-segments when said stroke is within the boundary of said one of said sub-segments and generating a new sub-segment including said new stroke when said new stroke is outside of said boundary.

3. (Previously Presented) A recognition process as claimed in claim 1, wherein generating one of said segments includes processing at least three previously generated sub-segments.
4. (Previously Presented) A recognition process as claimed in claim 3, wherein said merging step includes merging said sub-segments using a plurality of predetermined thresholds for said distance.
5. (Previously Presented) A recognition process as claimed in claim 4, wherein said thresholds represent a range of distance values.
6. (Previously Presented) A recognition process as claimed in claim 1, including merging adjacent segments which produce a merged boundary having a height to width ratio closer to one than the separate boundaries of the adjacent segments.
7. (Previously Presented) A recognition process as claimed in claim 1, including performing character recognition on said segments to generate a segment list representing said segments and respective possible characters associated with said segments.

8. (Previously Presented) A recognition process as claimed in claim 7, including generating a time sequence representation of said possible characters from said segment list and processing said time sequence representation using a language model to generate text representing recognised characters.

9. (Previously Presented) A recognition process as claimed in claim 1, wherein said generating and merging steps are executed in the real-time as character strokes are written.

10. (Previously Presented) A recognition apparatus having:

means for inputting character strokes;

means for generating sub-segments representing at least one character stroke, said sub-segments each having a boundary enclosing the at least one stroke of the sub-segment;

means for merging said sub-segments when the distance between centroids of the sub-segments are less than a predetermined threshold; and

means for generating segments representing possible characters from said sub-segments.

11. (Previously Presented) A recognition apparatus as claimed in claim 10, including means for processing a new character stroke by including said new stroke in one of said sub-segments when said stroke is within the boundary of said one of

said sub-segments and generating a new sub-segment including said new stoke when said new stoke is outside of said boundary.

12. (Previously Presented) A recognition apparatus as claimed in claim 10, wherein said merging means and said segment means process at least three previously generated sub-segments.

13. (Previously Presented) A recognition apparatus as claimed in claim 12, wherein said merging means merges said sub-segments using a plurality of predetermined thresholds for said distance.

14. (Previously Presented) A recognition apparatus as claimed in claim 13, wherein said thresholds represent a range of distance values.

15. (Previously Presented) A recognition apparatus as claimed in claim 10, including means for merging adjacent segments which produce a merged boundary having a height to width ratio closer to one than the separate boundaries of the adjacent segments.

16. (Previously Presented) A recognition apparatus as claimed in claim 10, including character recognition means for performing character recognition on said

segments to generate a segment list representing said segments and respective possible characters associated with the segments.

17. (Previously Presented) A recognition apparatus as claimed in claim 16, including means for generating a time sequence representation of said possible characters from said segment list and for processing said time sequence representation using a language model to generate text representing recognised characters, and means for displaying said text.

18. (Previously Presented) A recognition apparatus as claimed in claim 11, having a segmentation unit which includes said sub-segment generating means, said merging means, said segment generating means and said new character stroke processing means, and which operates in real-time for each written character stroke.

19. (Previously Presented) A recognition module stored on a computer readable storage medium, having:

means for generating sub-segments representing at least one character stroke, said sub-segments each having a boundary enclosing the at least one stroke of the sub-segment;

means for merging said sub-segments when the distance between centroids of the sub-segments are less than a predetermined threshold; and

means for generating segments representing possible characters from said sub-segments.

20. (Previously Presented) A recognition module as claimed in claim 19, including means for processing a new character stroke by including said new stroke in one of said sub-segments when said stroke is within the boundary of said one of said sub-segments and generating a new sub-segment including said new stroke when said new stroke is outside of said boundary.

21. (Previously Presented) A recognition module as claimed in claim 19, wherein said merging means and said segment means process at least three previously generated sub-segments.

22. (Previously Presented) A recognition module as claimed in claim 21, wherein said merging means merges said sub-segments using a plurality of predetermined thresholds for said distance.

23. (Previously Presented) A recognition module as claimed in claim 22, wherein said thresholds represent a range of distance values.

24. (Previously Presented) A recognition module as claimed in claim 19, including means for merging adjacent segments which produce a merged boundary

having a height to width ratio closer to one than the separate boundaries of the adjacent segments.

25. (Previously Presented) A recognition module as claimed in claim 19, including character recognition means for performing character recognition on said segments to generate a segment list representing said segments and respective possible characters associated with the segments.

26. (Previously Presented) A recognition module as claimed in claim 25, including means for generating a time sequence representation of said possible characters from said segment list and for processing said time sequence representation using a language model to generate text representing recognised characteristics.

27. (Previously Presented) A recognition module as claimed in claim 20, having a segmentation module which includes said sub-segment generating means, said merging means, said segment generating means and said new character stroke processing means, and which is executed in real-time for each written character stroke.

28. (Previously Presented) A computer readable medium containing executable instructions for performing the steps of:

generating sub-segments representing at least one character stroke, said sub-segments each having a boundary enclosing the at least one stroke of the sub-segment;

merging said sub-segments when the distance between centroids of the sub-segments are less than a predetermined threshold; and

generating segments representing possible characters from said sub-segments.

29. (Currently Amended) A computer readable medium as claimed in claim [[1]] 28, ~~wherein~~ further comprising the steps ~~performed include~~ of processing a new character stroke by including said new stroke in one of said sub-segments when said stroke is within the boundary of said one of said sub-segments and generating a new sub-segment including said new stroke when said new stroke is outside of said boundary.

30. (Previously Presented) A computer readable medium as claimed in claim 28, wherein the step of generating one of said segments includes processing at least three previously generated sub-segments.

31. (Previously Presented) A computer readable medium as claimed in claim 30, wherein said merging step includes merging said sub-segments using a plurality of predetermined thresholds for said distance.

32. (Previously Presented) A computer readable medium as claimed in claim 31, wherein said thresholds represent a range of distance values.

33. (Previously Presented) A computer readable medium as claimed in claim 28, including the step of merging adjacent segments with produce a merged boundary having a height to width ratio closer to one than the separate boundaries of the adjacent segments.

34. (Previously Presented) A computer readable medium as claimed in claim 28, including the step of performing character recognition on said segments to generate a segment list representing said segments and respective possible characters associated with said segments.

35. (Previously Presented) A computer readable medium as claimed in claim 34, including the step of generating a time sequence representation of said possible characters from said segment list and processing said time sequence representation using a language model to generate text representing recognised characters.

36. (Previously Presented) A computer readable medium as claimed in claim 28, wherein said generating and merging steps are executed in the real-time as character strokes are written.